THE FARMERS' CABINET;

DEVOTED TO AGRICULTURE, HORTICULTURE, AND RURAL ECONOMY.

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For the Farmers' Cabinet.

Agricultural Implements.

NO. V.

THE CORN SHELLER.

Machines for this purpose are made of various forms and materials, some of them formed so that projections on the periphery of a cylinder, operate on the corn, turn the ear round and shell (or separate) the corn from the cob; others have projections upon the end of a cylinder, or face of a wheel at right angles to the shaft, which operates on the corn. Another form is to have projections on *frustums* of *cones* for the same purpose.

The ear of corn in either case descends upon an inclined plane, so formed that some part of the ear is still in contact with a portion of the projections, and is permitted to turn round as it descends on the plane; a spring pressing against the plane with a proper degree of force, causes the projections to turn the ear round, shell the corn, and pass the cob from the machine, at the lower end of the inclined plane. Where the corn is dry or easily separated from the cob, either of these plans will answer, but where it is moist, or not easily separated, a compound circular motion seems better; such a motion to operate on the periphery of the ear, and at one end of the unshelled part, at the same time, is produced in the following manner, viz:—*Two frustums* of *cones* are placed on a shaft, with the small ends towards each other, and a spur cog wheel is placed between them on the same shaft. This wheel is acted on by another spur cog wheel of larger dimensions; so as to turn it and the two frustums. The sides of the larger wheel have pointed projections formed upon them, which operate on the corn, turn the ear round, and sometimes shell off part of the corn. Projections are also formed on the periphery of each frustum, extending in a direct line from one end to the other; these are made as thin as possible, consistent with the necessary strength, and so as not to cut or break the corn. Two inclined planes, one of them on each side of the larger wheel, extend past the frustums, and sufficiently near them to permit the projections to act on the corn; those projections on the sides, turn the ears round and shell part of the corn, and those on the peripheries the remainder. The space between the wheels and one plane, may be greater than the other; and by using the larger for large ears, and the smaller for small ones, the operation will be performed with less force than when the dimensions of both are equal. A spring to each plane, keeps a sufficient force or pressure on the ear to enable the projections to shell, (or remove,) the corn entirely from the cob.

The shafts of both wheels are usually placed in a horizontal position: and the inclined planes at such an angle, as the ear will pass the most rapidly by the wheels, and at the same time have the corn entirely removed from the cobs: forty-five degrees from the horizon, will in most cases probably be found a proper position.

The dimensions may be in proportion to the power intended to move the wheels, and they may be moved by hand or other power.

A good size for the power of a man, is as follows, viz:—Each frustum ten inches at the large end, and six at the small end, and two inches long; the small spur wheel four inches diameter, and the large one sixteen inches diameter, and one-fourth of an inch thick, exclusive of the projections, each of

which may extend one-fourth of an inch. The small ends of the frustums, may be three fourths of an inch asunder: and the springs and planes, placed so as to force the ear against the projections on both wheels, and the whole composed of iron and steel, or part of these and wood. The bearings of the shafts may be one inch in diameter, and the whole supported by a frame of proper dimensions.

Chester Co., Pa., 30th March, 1837.

For the Farmers' Cabinet.

The Observer.—No. 6.

THE WHEAT FLY.

In the present unsettled and conflicting state of opinion, respecting the *Wheat Fly*, and the appropriate remedies for the evil which it produces; it is highly important that we should distinguish between truth and error; and endeavor to systematise what is certainly known, so as to bring order out of confusion. With this object in view, I attempted in my last, to identify the true wheat fly, (cecydomyia destructor,) and to furnish some materials for a history of its habits. Those who have written on the subject, seem to have introduced confusion, by confounding this with other depredators on the wheat crop, whose habits are essentially different; such, for example, as the *Maryland fly*. Of this insect I possess very little knowledge. It, however, appears to be one of those who deposit their eggs in the grain before it is cut, much in the same way that the weevil, or *calandra granarius*, does after it is carried into the barn. The similarity will probably extend further. Both deposit their eggs *in the grain* for the express purpose that the larvæ may feed upon it. To secure this object, the eggs are speedily hatched, and the insect passes through the intermediate stages of larva and pupa, to the perfect state before winter. I think it may be laid down as an established rule, that *the eggs of insects deposited in early summer, hatch the same season.*

By confounding the histories of the wheat fly and the Maryland fly together, a sort of mongrel opinion has been formed, that *the wheat fly lays its eggs in the grain.* Hence, also, originated the unphilosophical notion of sowing the eggs along with the wheat, where they undergo a queer sort of *animal vegetation* in the soil, and continue to "grow with the growth, and strengthen with the strength" of the plants which they inhabit. Some one has told us, (Cabinet, p. 73,) "that with the aid of a microscope, the egg is discernible, in the form of a glutinous matter," on the grain. But is he certain of the fact, that the glutinous matter was an egg? We are not even told that it was in the form of an egg, but "in the form of glutinous matter." Now, glutinous matter is not, necessarily, an egg, and he has afforded us no evidence that it was so in the present case. We are again told, (Cabinet, p. 145,) that somebody "observed the egg on the grain." Admit all this, and what sort of eggs did they see? were they the eggs of the wheat fly—of the Maryland fly—of some other fly—or of no fly at all? Here we are again left without evidence. Therefore,

"The sceptic will remain a sceptic still."

Again, admit that they were *bona fide* the eggs of the wheat fly:—are we to understand that they require the fostering care of the seedman to propagate them from year to year? That they can only hatch or vegetate in the ground? and that having done so, they ascend with the young plant? In short, that nature has provided for the production of a sort of eggs, the vivification of which requires the kind attention of the very creature who is most deeply interested in their destruction! This seems to place the advocates of the doctrine in a dilemma. Whatever other advantages may result from steeping seed wheat—mixing it with quick lime, &c., it seems to me too hypothetical to do so, for the purpose of destroying the eggs of the wheat fly, until their existence *on the grain* is sustained by better evidence. Nor can it be more useful to kill the eggs of the Maryland fly, if its habits are what I have mentioned.

If I have correctly described the habits of the *cecydomyia destructor*, it will appear obvious to the reader, that no application to the grain before sowing, can destroy it. And I fear that it will prove equally true, that no application to the wheat while growing, can answer any better purpose. Burning the stubble, or ploughing it down immediately after harvest, can do no good, for the fly is not then there. After *good husbandry*, the only rational means of preventing the mischief, seems to be *late sowing*. If the fly can only survive our ordinary winters in the pupa state—we may, by sowing late, prevent them from getting into that state before cold weather comes on—when they will necessarily perish. By this means, too, we would prevent a deposition of eggs in the spring, and so save one crop from destruction, at least by the fly.

Happily, nature has done what art could not accomplish, in furnishing a preventive check to the increase of the wheat fly. Every one knows that the "great fish eats the small ones, the world over;"—but every one does not know that the small as certainly devour the large ones.

There is a very numerous family of insects which were included by Linnæus, in his

genus Ichneumon, whose instinctive habits lead them to deposit their eggs in the larvæ of other insects, such as caterpillars, &c. They do this in order that their progeny may feed upon them; but in doing so they also destroy them. Like all other *parasites*, they first impoverish, and then destroy their generous supporters. Adapted to the transient nature of their nidus, the larvæ of the ichneumons, speedily pass through their several stages, sometimes even before the death, or transformation of the worm, they inhabit. Hence, we may sometimes see the larvæ, or perhaps the perfect insect, issuing from the dying or dead caterpillar. A circumstance well suited to deceive incautious observers, and to afford a hint to those who "*see cut worms changing to flies.*"

In the *ichneumon* family, there is fortunately one species which selects the larvæ of the wheat fly, for the nidus of its offspring. It belongs to the

Order, Hymenoptera—having four wings, the upper ones largest, not reticulated.
Genus, Ceraphron—of Lattriele.
Species, Destructor—of Say.

Ceraphron-destructor. *Body*, black; *abdomen*, subovate pointed; *length*, one tenth of an inch. Has considerable resemblance to a wasp in miniature.

It appears to seek out the larvæ of the cecydomyia, and to deposit its eggs in them, by piercing the sheath of the leaf, as the pea bug pierces the pod, opposite the green pea, for the same purpose. It may be sometimes obtained from wheat, in the same manner as was recommended for procuring the wheat fly. Probably, it does not come out so early as the wheat fly, by one or two weeks. For a detailed description, and figure, see the paper already referred to, in the Journal of the *Acad. Nat. Science*, vol. 1, p. 47.

It is impossible to estimate the extent of influence, which the *ceraphron* exerts in checking the increase of the *cecydomyia*. I am inclined to think it very great. Perhaps without it, we might be entirely unable to raise wheat at all.

Since the foregoing was written, a friend of mine, who is a very correct observer, informed me that he once brought home a handful of straws, containing the fly, and laid them in an out building. A day or two after, he observed a considerable number of ceraphrons collected upon the straw; and apparently in search of the young cecydomyiæ. Should they increase in a greater ratio, than the last named insect, they may be the means of eventually rendering it harmless, if they do not altogether exterminate it.

New Garden, 4th mo. 8th, 1837.

[We give the following communication from one of our valued correspondents a place in the Cabinet, in order that both sides may be heard. No good, we are persuaded, can possibly result from a "war of words," but the greatest benefit may be expected, from a full and free "investigation of facts." We therefore hope that our correspondents, waving all personalities, will continue the investigation, as we are satisfied that a free discussion of the subject, will have a tendency to correct many of the prevailing errors, with which it is now surrounded.]

For the Farmers' Cabinet.

"Does the Pith of the Horn waste away?"

Observer's reply to my article, seems so armed at all points, that I feel some reluctance in making a rejoinder, for fear it may lead to a war of words, instead of an investigation of facts.

Observer says, that the omission of the symptom of cold horn, in his quotation from Dr. Tofts, was quite unintentional; this is a sufficient apology; and whether the symptom is important or not, it was certainly important to rectify the error.

The next point of difference seems to have grown out of a mistake. Observer says, "during life the blood must circulate through the horn." I understood him to mean during the life of the animal, but Observer appears to have intended it to apply merely to the life of the horn.

We now come to what Observer calls the "pith of the controversy;" "does the pith of the horn waste,—yea or nay?" Here Observer repeats his challenge, and grows impatient for a horn; even asks for a hundred hollow horns: and from this out, the tone and manner of his reply, seem better fitted for "challenge" and conquest, than for quiet and sober investigation.

I am glad to see Observer correcting his "speculations" or more properly his quotations; he finds them "more erroneous" than he "expected them to be."

I will hint to him still further improvements; in page 212 of the Cabinet he says "a vast number of the hides of such cattle, are annually sold to tanners throughout our country. The shell is separated from the pith of the horns, affording an excellent school for observation." In the regular business of tanning, no such separation takes place; the tanners cut out the horns, shell and pith together; throw them into a horn house, or place of deposit: there they lay until the comb maker comes, and the house is emptied. Tanners know no more about the hollow horn, than other people, only as they have the means of making experiments. I likewise think it would be wise in Observer,

to make some amendments in his challenge, as he calls it; he says "such a wasting of the pith does not take place." How does Observer know this confident assertion to be a fact; he may know of piths that do exist, but of the piths which he has never seen, he knows nothing. Knowledge of the absence of things is a superhuman attribute. All that a man knows, is limited to the sphere of his observation; consequently of non-existences he is totally ignorant; therefore, the challenge refutes itself.

But independent of this loose manner, in which his challenge is worded, I choose not to accept it; first, because I do not know that I can easily find a hollow horn; and secondly, I desire to avoid controversy: it produces excitement, and that kind of feeling often induces people to love their own opinions better than the truth, or reasonableness of the case.

My former remarks in the Cabinet, grew out of Observer's novel manner of treating the subject. He says in page 211, "If inflammation assumes a more violent form, and extends to the *bones*, producing bony ulceration, or caries, the discharge will be darker colored, and highly offensive, constituting putrid horn." In the same essay, page 213, he says "that hollow horn, or a disease attended with wasting of the bony pith of the horn, has no existence in nature." This seems like admitting the fact, and then denying it; yet in his reply we find reiterated the same apparent contradictions; we read in page 277, that "the horn is liable to caries in common, with all other bony structures;" but again he says, "I do not admit the fact of this bony ulceration, because I have never seen it do so." Here Observer admits the liability, but denies the possibility; that is, the horn may be hollow, but never is hollow; "the bony pith is liable to caries, to discharge and waste away;" but the "wasting of the bony pith of the horn, has no existence in nature." This is what I consider the "pith of the controversy." Does Observer believe this liable case is a possible one; "yea or nay?"

I have since my last communication, dissected a considerable number of horns, all from cattle said to have died of hollow horn; but I have not found any satisfactory evidence of waste or decay, in the pith or bone of any of them. I am therefore unable to send Observer even "one hollow horn." As to the existence of the disease, I have found no reason to change my opinion; I consider the bony pith of "the horn, is liable to caries in common with all other bony structures," and if I believe a thing is liable to happen, I think it reasonable to believe it sometimes does happen. I do not say it is a disease that frequently occurs; I think it probably does not; but to say that "such a wasting of the pith has no existence in nature," is in my opinion assuming a position that has no existence in reason, in analogy, nor in the natural order of things.

The bones of all animals are liable to disease; there is not a particle of organised matter, bone, muscle or sinew, but what is subject to suppuration, decay, waste, and the external parts to exfoliation? and why should the pith of the horn be an exception?

If Observer is right, then is the bone of the horn unlike all other bones; and what reason have we to believe this? no reason only that its very spongy substance, and exposed situation, renders it more vulnerable and of course more liable to disease, which I apprehend is the fact.

I promised to examine the horns of cattle reported to have died of the hollow horn; I have done so, and have found none that were "wasted away;" but how many bones would we have to examine, before we could find a rotten one, or one that had "wasted away," and yet I presume Observer knows that such a disease exists. Suppose I were to say to Observer, that there is something wrong in the generally received opinion of *bones* being liable to waste and decay; that this is a part of the animal, that is never affected by the diseases, incident to organized beings; would he not say to me that this opinion was founded upon fact, that the testimony was ample to satisfy any unprejudiced mind; would he not refer me to authentic history of diseased bones; and would he not be surprised if I refused to "admit the fact of this bony ulceration, because I had never seen them do so." I have never seen the cities of London, Paris, or Amsterdam, yet I feel no hesitation in admitting the fact of their existence. I have never seen a horn in which I could say the pith had wasted away, during the life of the animal, but still I believe it has an "existence in nature."

I think there is reason to believe that the horns of cattle, become chilled in extreme cold weather; and from this cause I apprehend the "corrupted horn, putrid horn, rotten," and consequently hollow horn is produced. There is no doubt, but the pith of the horn wastes away sooner after the death of the animal, than any other bone; on examination, I have found a number of piths decayed and rotten, toward the point, and the bone at the root of the horn, perfectly sound. This fact favors the opinion that the pith is more frequently the seat of disease, than any other bone; it shows that the pith of the horn has less power than other bones, to resist the general decomposition of organised bodies; and consequently more liable to waste and

decay, during the life of the animal, and particularly so when we consider its exposed situation.

There is a medium between all extremes, which it is hurtful to pass; and the present case is one that seems to illustrate the folly of pretending to a knowledge of things, while the facts that are to establish the truth, are only on the way of investigation.

The hollow horn, is a kind of general term given by ignorant people, to all the diseases of which cattle die in the spring season; and this want of knowledge is perhaps as near the truth, as that excess of information which pretends to know, that such a disease "has no existence in nature."

A SUBSCRIBER.

For the Farmers' Cabinet.

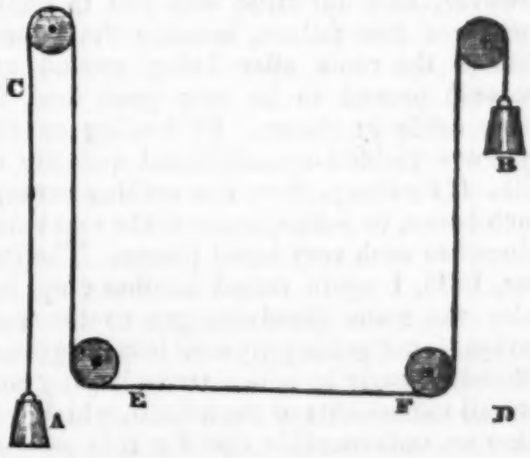
Alternating Elevator for Horse Power.

As the application of horse power instead of men is generally considered advantageous, I have concluded to send a description of a machine, which will be found very useful in raising ponderous substances, such as hay, grain, and other articles, to the higher parts of barns and warehouses, or materials for the construction of buildings, &c. Suppose one end of a rope made fast to a hook or other suitable apparatus, to sustain or hold the object to be elevated, and passed over a stationary wheel or pulley at a point above that to which the objects are to be raised, and under another stationary pulley, placed at a point two or three feet above the ground or object upon which the horse is intended to move, and under another stationary pulley at the same height above the ground or horse's course, as the last mentioned one, and at a distance from it two or three feet more than the height or space through which the objects to be elevated are intended to pass; and over another stationary pulley above the point to which the objects are to be raised, and down to the point from which the objects are to be taken, and the other end of the rope attached to a hook or suitable object to sustain or bear the article to be raised while the other end of the rope descends.

Now suppose one end of the rope to be at the highest point, and the other end at the lowest point, and the hook or other apparatus connected with the object to be raised, and the horse or other power attached to the rope between the two lower pullies, and near to that, one between him and the lower end of the rope, and made to move toward the other pulley, a distance equal to the space through which the ends of the rope are desired to pass; this causes the loaded end of the rope to ascend and the unloaded one to descend the required distance. The load is then detached and another load attached to the other end, and the horse or other power made to move in an opposite direction, which raises the second load while the end of the rope that at first ascended, now descends, and so on each end of the rope ascending loaded, and descending unloaded alternately, as the horse or other moving power passes to and fro between the two lower pullies. Where the two lower pullies cannot be placed at a sufficient distance apart, the horse or other moving power may make an angle or angles and the rope to which the same is attached, be permittted to turn a friction pulley or pullies.

An increase of power may be obtained by using blocks and systems of pullies, and increasing the relative distance for the moving power to pass to and fro, compared with the space through which the elevated objects are to move.

Fig. 75.



The horse moving from E to F raises the weight or object A to C, and lowers the object B to D, and when moving from F to E raises the object B, and lowers A the same distance.

Chester county, Pa., April 13, 1837. P.

[The following letter from an intelligent and practical farmer, addressed to BENJ. M. HOLLINSHEAD, Esq. of this city, we most respectfully commend to the attention of our readers.]

Sugar Beets.

In answer to thy inquiries as to the value of the Beet-root crop, I may state the following facts as the result of my own experience, and from which I come to the conclusion, that, for the purpose to which I have applied them, there is no crop better adapted. The first crop of Beets I raised was in 1835, when I planted about the sixth part of an acre in the middle of the sixth month, and from which I gathered 75 bushels; these I planted in rows about three feet apart, and about one foot between each plant; from this experiment I found, that to raise 450 bushels of the Beet-root on an acre of ground, required much less labor than a crop of common potatoes. Neither do I consider this an average estimate of what

might be produced, for the following reasons:—1st. They should be planted earlier in the season, that in case any of the seed should fail to come up, (as some of mine did,) the vacancies might be filled by transplanting from places where they would be too thick; and in sowing the seed enough should be put in the ground for that purpose. 2d. They might be planted much nearer together, say the rows two feet apart, and about eight inches between each plant in the rows; there would be then sufficient room to give them all the necessary culture. My object in raising this crop was to make an experiment in the way of obtaining Sugar, at the suggestion of an individual who had that object in contemplation for several years; but from our limited knowledge of the process necessary to the accomplishment of that end, were not able to succeed further than in obtaining tolerably good molasses. I discovered, however, that but little was lost in consequence of this failure, because the pumice (that is the roots after being ground and pressed) proved to be very good food for either cattle or sheep. By feeding on this my cows yielded an additional quantity of milk. If for sheep, there was nothing perhaps much better, in consequence of the root being reduced to such very small pieces. The last year, 1836, I again raised another crop, but under the same disadvantages as the year previous—not getting my seed into the ground sufficiently early to admit transplanting and have all the benefits of the season, which was rather an unfavourable one for this as well as most other crops, in consequence of so much cold weather. I had, however, a large quantity of beets, which I have fed away to cattle to good advantage, making use of the tops, in the early part of the fall, as food for hogs, and the roots for cattle. I have fed my cows chiefly with them, and find they give more milk than before, and of a good quality. Laying aside the profits contemplated in the manufacture of sugar from the beet-root, I think it as valuable a crop to the farmer as almost any other, and I think by fair experiment it will be found to be better.

The manufacture of sugar from the beets is a subject that is now engaging the attention of many individuals in different parts of this country, and I have no doubt but little further exertion in diffusing a knowledge of the fact, that it is now become a profitable business both to the agriculturist and manufacturer in foreign countries, and also if the improvements, plans, processes, &c., by which it is carried on, would in a FEW YEARS bring the thing into effectual operation.

I am respectfully, thy friend,

JOHN JACKSON.

Darby, Del. co., 1st Mo. 1837.

[With the following communication from one of our active and esteemed friends in Washington county, we received the names of twenty-four new subscribers, and twenty dollars. We merely mention this as a matter of encouragement to others.]

Receipt for the Cure of Scab in Sheep.

Internally—¼ of magnesia to 1 lb. of sulphur, mix it well, and give it with salt, about six table spoonfuls to 100 head. This must be given a short time previous to the *external* application, which is to be prepared as follows:

Take of the root of skunk cabbage 1 lb. dry—7 lbs. of tobacco—½ bushel of green mullien leaves—½ bushel of the roots of elder—½ bushel of the top of elder. Boil them in chamber ley, and apply the decoction as warm as the animal can bear it, which may be done by putting the liquid into a bottle; perforate the cork, through which insert a quill, from which pour the liquid. Particular care should be taken to wet the body of the sheep all over, using about 1 quart of liquor to a sheep. The above ingredient will make a decoction of sufficient strength to cure one hundred head.

The disease for which the foregoing is a cure, has been raging in this (Washington) county for sometime, and still continues to rage. The person who furnished it had his flock badly infected with it; his sheep are now cured by the application of the foregoing receipt. The internal application is once prior to the external and twice after,—the external application but once.

Report,

Of the Committee on Agriculture, to whom was referred the Petition of citizens of Union county, praying for Legislative aid to Agriculture. Mr. Harper, *Ch'm. Read in the Senate of Pennsylvania, March* 25, 1837.

That they have bestowed as much time and attention on the subject, as their other avocations would permit. The subject brought before the Senate by the petitioners is one of very great importance. Land is the source of subsistence for all. It is the capital which supports all kinds of business—it is the substratum of credit. The precious metals may be the basis of circulation; but there could be very little active business, without the credit which rests upon land, and its annual productions. The specific value of land, as well as of its produce, mainly depends upon a proper system of agriculture, of course the interests of every man in the community are blended with those of the farmer. The subject, therefore, is too important to be viewed with indifference by a wise Legisla-

ture, nor will they neglect to apply all the powers constitutionally vested in them, to advance the prosperity of the most numerous and the most valuable class of our citizens.

It becomes proper, in the first place, to inquire whether, in view of the present state of agriculture, legislative aid is necessary for its further improvement. From our own observation, and information obtained from other sources, we are led to believe that the condition of agriculture in our state, is not what it ought to be. The object of farming ought to be to secure the greatest returns for labor and capital invested; not merely the greatest crops, for a year or two years, but the largest annual returns, compatible with the increasing value and productiveness of the soil. But is this, in fact, the object with a large portion of our farmers? Does not the contrary appear, manifestly, in many instances! Their sole object appears to be to live with the least possible labor, entirely regardless of the consequences to the land. Their farms are like the garden of the sluggard, overrun with useless and noxious plants; and we may pass them by, as almost beyond the hope of amendment. But, do those who have the true object before them, pursue it in a way likely to obtain its accomplishment? Our Commonwealth has great capabilities for agriculture; a large amount of fertile soil; a pleasant and healthful climate, and settled with a hardy, industrious, and enterprising race of men; yet, how few can tell how much can be gathered from a perfectly cultivated acre? How few understand the secret of obtaining from the soil the greatest amount of its annual productions, without the deterioration of its quality? Yet good farming requires, that these should never be severed. No man can farm profitably, either to the community or to himself, (supposing him to be the owner of the soil,) who impoverishes his land; and his energies are wasted, who improves land, without obtaining profits in return. Doubtless there is a wide difference in the modes of farming, in different parts of the state, some lands being much better tilled than others; still, it is evident, there is great room for improvement in them all. These improvements are indispensably necessary. The facilities of transportation from the fresh and fertile lands of the west, will soon be so great, that our farmers must find rivals where, heretofore, competition has not been thought of; the difference of carriage will be no protection against their abundance, if a slovenly and unproductive mode of farming shall predominate here. Besides, the strength and wealth of a State consists much in the number and character of its people. Thousands of our best and most intelligent citizens are yearly tempted to go west, who would better stay here, under an improved system of agriculture. They take with them the accumulations of former industry and economy, and they bestow their exertions in enhancing the prosperity of another State, detracting so much from our own. Are these evils to be borne forever? or till those States shall be so much ahead of us, that the tide of emigration shall set back on us, as affording the best theatre for industry, ingenuity, and enterprise? Or until the same system of improvident farming shall have reduced western lands below our own fertility? We cannot believe that our citizens, or Legislature, will carry their neglect or supineness to that extent. We believe that our errors will be corrected: and that means exist and will be applied, to raise our most impoverished fields to more than their pristine fertility.

But can all this be effected without Legislative interference? The experience of this world does not give an answer in the affirmative. Although individual enterprise and public spirit may do much in particular districts, general improvement has ever been the result of governmental patronage. Individual care and skill have acted as pioneers, by showing what could be done; and Government has aided in the dissemination of knowledge, and has encouraged its application in practice. It is unnecessary to give a detailed history of the agricultural colonies of Holland and the Netherlands; of the boards of agriculture of England and Scotland; and latterly of France, of some parts of Germany, and of some of the States of this Union. Is it not reasonable that it should be so? It will be recollected, that farming is an art, is as much imitative, as any of the mechanic arts, with this difference against it, that in the mechanic arts, all the materials are of a known quality; and those, which profess to be alike, are really homogeneous. The powers of water, in equal quantities and elevations, are equal all the world over; and so in most of the arts; —while the soil of all countries, and of any considerable portions of the same country are so diverse, that similar applications will produce quite contrary results. So much is this the case, that experiments from any considerable distance, are deservedly looked upon with distrust. The whole character of the soil may change in a few rods. As an instance, it may be mentioned, that our geological survey has ascertained that the great limestone range of the Cumberland valley, divides the borough of Harrisburg. It will be necessary to have a series of experiments conducted, on almost every square mile of our territory, before the powers of our soil can be universally and fully developed. Consider these varieties of our soil, as connected with the changes of atmosphere, and varie-

ties of climate and seasons in our Commonwealth, and the Senate will have some imperfect idea of what must be done, before the subject shall be exhausted. Can it be expected that individuals can do all these things and make known the results for the general benefit? It is worthy of consideration that the profits of agriculture, though among the most sure, are also the smallest, which reward the industry of any class of our citizens; that a farmer's business is almost always pressing, few items of it admitting of any delay. Think also, that in very few instances is the farmer protected in the enjoyment of the profits of the inventions, which his skill and talents enable him to make, and that his portion of the public burthens is much greater, in proportion to his income, than that of any other class of our citizens. Think of these things, and then say whether the farmer, laboring under so many disadvantages, can afford to be so much more public spirited than any body else? We think not. For these, and other reasons, let our expectations be what they may, the Commonwealth, in fact, will be slow to reap the full benefit of individual exertions. They will be made slowly; and a knowledge of them will be spread slowly; so slowly, that a whole generation shall pass by without being scarcely sensible of a forward movement.

Will it be said that individuals, by voluntary association and contribution of funds may remedy this evil? Something may, no doubt, be done; but the evil is too great to be fully mastered in this way. It will require a series of experiments, during a course of years, many of which will fail. A voluntary association may be very useful; but to require them to give their time and attention, and likewise to be at all the expense of spreading information, is asking too much. Many are so unreasonable as to expect flowers and fruit almost instantaneously after the seed is sown. They become discouraged by a little delay, and retire from the society. This discourages others, till at last, perhaps just at the time when the most brilliant results might be expected, the most persevering and public spirited desist from their labors. The society sinks—the cause sinks—and, in addition to the mortification of disappointed hopes and defeated exertions, they must bear the ridicule and derision with which the ignorant, prejudiced, and the fault-finding proclaim their triumph.

When we consider the importance of the subject, and the uncertainty of these improvements being made, or rather the certainty that they will not be made by individual or associated exertions alone, we might suppose the argument in favour of Legislative action complete. It is well known, that mechanics, manufacturers, and those engaged in other branches of industry, beneficial merely to a single district or neighborhood, ask and receive Legislative bounty, protection and exclusive privileges. This is an interest, affecting the whole State, which, if prosperous, makes all our outlays for internal improvement profitable; which, if not prosperous, must make us all bankrupt. The value of the annual produce of the land in Pennsylvania, amounts at a low estimate, to forty or fifty millions of dollars. Suppose, that the utmost that could be done by the exertions of all, should be to add ten per cent. to that productiveness, what a difference it would make in the prosperity of our State, in a few years! It might just make the difference between prosperity and adversity, for if we could live without an annual gain of four or five millions, and no gain at all! What an additional impetus it might give to the extent and productiveness of our public works, to have the transportation of this in addition to the present amount?—How many valuable citizens would be induced to come here, and be dissuaded from going from us under such a state of things? Does any one doubt, that under a proper system of farming, ten per cent. would be added to the present amount of our agricultural productions? How very few plantations are now so perfectly managed, that twenty or twenty-five per cent. could not be added? How many might easily be made to yield fifty? And are there not many, very many, whose productiveness could be doubled! Is not, therefore, the argument in favour of Legislative action, conclusive? There still remains a most difficult and perplexing part of this subject for consideration. In what manner, and to what extent, shall aid to this great interest be administered? It is evident that means must be used to have our farming conducted on scientific principles. It must, in some way, be interwoven with our system of education; men must learn to judge from the constituent parts of the soil, and their combinations, what will be the species and quality of its most profitable productions. An agricultural school and a pattern farm, under proper regulations, would imbue the minds of its pupils with valuable principles, and would exemplify and illustrate those principles with a corresponding and successful practice. This would be expensive; but a very small ratio of increase in the annual productions of our farms would repay it with enormous interest. One successful school of this kind, would no doubt, be the means of organizing many others; and would, eventually, have a most beneficial influence on the education and agriculture of our State, and a most beneficial influence on the health and morals of our literary young men. Very signal benefits might be derived to the State from an agricul-

tural survey, soon after the completion of the geological survey now in progress, under an act of Assembly. A report of a skilful practical farmer, after a thorough examination of all the varieties of farming in use among us, would be a source of much valuable knowledge. Such a report should give minute details; and then would be seen the intimate relation between the minerals, which the earth covers, and the true method of cultivating its surface. Then might a pretty accurate judgment be formed, as to what we might reasonably expect and hope from our labours.

There yet remains for consideration, the particular way pointed out by the petitioners. They ask Legislative encouragement to county agricultural societies, by aiding them to offer such premiums as will induce the ingenious and enterprising to devote their labor for the public benefit. It has the recommendations of incurring but a small expense, and of avoiding too much governmental interference in the pursuits of individuals. Its tendency would be to elevate the standard of good farming; and this every government ought to do, if it were only to increase the facility of raising taxes. But in a popular government like ours, where the happiness and prosperity of the people ought to be the only aims of government, the means of promoting them cannot be neglected without great injustice.

The committee have supposed, that this subject would be likely to attract public attention; and that, by another year, public opinion would indicate the proper course for our successors to pursue. The arrangement of the details of a general law on the subject, would not be without its difficulties; and as the session is near the close, they have concluded to report no bill, and to recommend no further immediate action on the prayer of the petitioners. They therefore respectfully conclude with the following resolution:

Resolved, That the committee be discharged from the further consideration of the subject, and that it be recommended to the early attention of the next Legislature.

Blight in Pear Trees.

The Pennsylvania Horticultural Society, anxious to promote the discovery of a preventive for the disease usually termed *blight* in Pear Trees, offers a premium of FIVE HUNDRED DOLLARS, to be paid the person who shall discover and make public an effectual means of preventing its attack. The premium not to be awarded until after the expiration of three years from the publication of the preventive, nor until the Society shall be fully satisfied of its efficacy. Communications on the subject may be addressed per mail to David Landreth, Cor. Sec. Philadelphia.

Seed Stores.

[Persons residing at a distance from the city, frequently inquire where they may purchase seeds, without fear of imposition. We take great pleasure in recommending to our patrons, and all interested, the seed establishments of D. Mauphy, No. 5 South-Fifth st., and D. Landreth and Co. No. 63 Chesnut st., Philadelphia; Joseph Breck and Co. Boston, and R. Sinclair, Jr. & Co. Baltimore.]

Extracts from the Catalogue of D. Landreth & Co., with Remarks.

ARTICHOKE,

Large globe, — A perennial plant; the flower heads in an immature state contain the part used, which is the pulpy receptacle commonly termed the bottom, freed from the bristles or seed-down. The tender central leaf-stalk or mid-rib of the leaf, blanched, is by some thought preferable to the Cardoon. Plant the seed early in the Spring, three or four inches apart in rows, the latter separated so as to admit of hoeing—when one year old, transplant to permanent beds, allowing each plant two or three feet square of room—protect during Winter by raising over them a mound of light dry earth.

ASPARAGUS,

Large green,—Early in the Spring soak the seed in warm water for 24 hours, then drill it in thinly, in rows sufficiently wide apart to admit the hoe—when two or three years old, they may be transplanted into permanent beds, which should be so situated as to cast off an excess of moisture. A convenient width for the beds is four feet with three rows of plants in each; they should be planted at least four inches beneath the surface, and well manured at the time and annually thereafter.

BEANS,

Long pod, broad Windsor. — These are sometimes called English or Horse-Beans. Plant very early in the Spring, in double or single drills.

Early six weeks, red speckled valentine China red-eyed, brown speckled valentine, or refugee, royal dwarf, white, red French, cranberry bush.—These are usually termed Dwarf or Bush Beans. The early six weeks, Red speckled Valentine and China red-eye, are among the earliest. They may be planted for the first and succession crops from the middle of Spring till close of Summer—the usual mode of culture is in rows or drills.

Lima, Carolina or Sewee, scarlet runner, white Dutch.—These require poles; the two first are rather tender, and should not be planted till close of Spring. They may be forwarded by sprouting them in a hot-bed, and transplanting at the proper time.

BEET,

Early turnep-rooted, long blood-red,—Generally esteemed the best for table use, may be sown in drills from early in the Spring till commencement of Summer.—The plants should stand six to eight inches apart in the drills, but the seed should be put in thicker, to secure a full crop. *French Sugar*,—This is attracting much attention. It is cultivated precisely as is the ordinary kind. Those who desire full information as to its culture and conversion into Sugar, are referred to Chaptal's Agricultural Chemistry, and the Report of the Philadelphia Sugar Beet Company. *Swiss Chard*,—The *leaves* of this variety are used after the manner of Spinach —the *mid-rib* of the leaf as Asparagus. Cultivated as the common Beet, but requires more room. *Mangel Wurtzel*,—Principally grown in farm culture for stock. May be reared similarly to the ordinary kinds, but is usually planted with the drills wide enough apart to admit the horse hoe.

To preserve beets during Winter, pack them in a cellar in horizontal layers mixed with dry earth, or in hills in the open air, with from two to three feet of earth over them.

BORECOLE,

Dwarf German greens, or kale.—This is an excellent green for Winter and Spring use; being dwarf, it is easily preserved during severe weather. Sow early in Autumn, in good ground, either broad cast or in drills, and treat as for Winter Spinach.

Scotch Kale,—Sow in seed-bed middle of Spring, and transplant and treat as directed for Winter Cabbage.

BROCCOLI,

Purple cape: Imported seed.—This is decidedly the best of many kinds — produces heads like Cauliflower, in Autumn. Sow in seed-bed middle of Spring, transplant into very rich ground when eight to twelve inches high, and manage generally as usual with Winter Cabbage.

BRUSSELS SPROUTS,

Cultivated for the small heads which spring in considerable numbers from the main stem. Sow in seed-bed middle of Spring, and transplant and manage as Winter Cabbage.

CABBAGE,

Early York, first early, early sugarloaf, second do., Landreth's large York do. Philadelphia, third early, or late Summer, early Battersea, do.—The early and Summer varieties are usually sown in seed-beds early in Autumn, protected during Winter, and transplanted early in the Spring. Where the climate is mild, and the land suitable, they are planted in the Autumn, in which case they head earlier than those put out in Spring. Should a supply of plants not have been obtained in Autumn, sow in hot-bed very early in Spring, or somewhat later on a warm border in the open air. But let it be borne in mind that in no case can fine Cabbage be had unless on heavily manured and well-tilled land—especially the early kind.

Curled Savoy, flat Dutch, large late Bergen, large drumhead, drumhead Savoy, red Dutch, for pickling,—Late Autumn and Winter sorts. Sow in seed-bed middle to latter end of Spring, and transplant early in Summer. To have these kinds head early in the Autumn, sow at same time with the early sorts. To keep them during Winter, bury the stalk and part of the head with earth—over which, if the cold be severe, sprinkle straw.

CARDOON,

The tender stalks of the inner leaves rendered white and delicate by earthing up, are used for stewing; and for soups and salad in Autumn and Winter. Sow early in the Spring, and when one year old, transplant to permanent positions—allow each plant two to three feet square.

CARROT,

Early horn, long orange.—These are by the majority of cultivators esteemed the better kinds for table use, and some who grow them in field culture, prefer the long orange to the *Alteringham*, as being richer and equally productive. Sow early in Spring in drills, in deeply dug and well-manured ground —the drills should be twelve to eighteen inches apart—when the plants are up a few inches, weed and thin them, so as to stand five or six inches from each other, except those intended for early use, which may be thinned by drawing the daily supply.

Alteringham, or field,—In field culture, the drills should be sufficiently separated to admit the horse-hoe, say thirty to thirty-six inches. To preserve during Winter, remove them to a cellar, or protect them where they stand.

CAULIFLOWER,

Early: Imported seed.—Sow the early sort in seed-beds, beginning of Autumn. Keep them in a "cold frame," protected from severe cold during Winter, and transplant to very rich ground, so soon as frost ceases. Hand-glasses or boxes placed over them at night, when first put out, are useful.

Late: Imported seed.—The late variety matures in the Autumn, and is sown at the same time, and managed similarly to Cape Broccoli. It is not, however, so certain to succeed as the Broccoli—nor is it a better vegetable, when obtained.

CELERY.

White solid, red solid.—Sow quite early in the Spring, in a moist place and convenient to water, which give freely as the plants advance in growth.

When the plants are six inches, more or less in height, transplant a portion into trenches—which repeat at intervals of two or three weeks, for a succession, until the necessary quantity be set out; as they advance in growth, blanch by earthing up gradually: that intended for late Winter and Spring use, had better not be blanched at all.

Celeriac, or turnep-rooted,—Cultivated similarly to the common sorts.

CHERVIL,

Used as small salad. Sow in narrow drills early in the Spring, and again after the heat of Summer.

CORN SALAD,

Used as a small salad throughout the Winter and Spring. Sow thickly in drills first of Autumn, and sprinkle with straw on the approach of severe weather.

CORN,

Indian, golden Sioux, sweet or sugar, early white flint,—The golden Sioux is the earliest variety, which is its only recommendation for table use. The sweet or sugar is by far the best kind, and the white flint next in quality.

CRESS, OR PEPPER GRASS,

Curled,—Used as small salad. Sow very thickly in shallow drills, on a smooth surface, at short intervals throughout the season.

CUCUMBER,

Early Frame.—For early use, plant in hills on a warm border, latter end of Spring.

Long Green.—This variety is principally used for pickling. Plant in hills middle of Summer, and manage as usual with the early kind.

EGG PLANT OR MELONGENA,

Large purple, white—ornamental.—Sow in hot-bed or other protected place very early in the Spring—and late in Spring transplant into very rich ground.

ENDIVE,

Curled, broad leaved.—Sow at close of Spring to middle of Summer in shallow drills; when up an inch or two, thin out to stand a foot apart—tie up to blanch as needed.

LEEK,

Large London or flag-leaved.—Sow in seed-bed middle of Spring—when the plants are four or five inches high, transplant into rows—plants and rows wide enough apart to admit the hoe.

LETTUCE,

Early curled,—Used as small salad. Sow very thickly on a smooth surface, early in Spring, and at any time throughout the season.

Early cabbage,—Medium sized head, very firm.

Brown Dutch,—Resembles the early Cabbage.

Royal cabbage,—Large firm head, very superior.

Curled India,—Large head, withstands the heat well; this is a variety of uncommon excellence.

White cos, green cos,—Upright growing kinds, very crisp and tender—but soon shoot to seed.

To have fine head Lettuce, sow in seed-bed middle of Autumn—protect the plants by a cold frame or with litter, as they stand in the ground; early in the Spring transplant them into rich ground. For a later supply, sow in drills from time to time, during Spring and Summer—when up a few inches, thin out, leaving plants at proper distances. For this purpose the Royal Cabbage and India are the better kinds.

MELON,

Nutmeg, N. J. seed. Citron, N. J. seed. Both fine kinds of the cantelope or musk variety. Plant in hills of light soil, latter end of Spring. Pumpkins and squashes, if grown near by, deteriorate them.

Water, N. J. seed.—Plant in hills of light sandy earth, latter end of Spring.

MUSHROOM SPAWN,

Imported,—Kept on sale in the form of blocks or bricks. Planted in hot-beds and banks of dung, covered with earth.

MUSTARD,

White, imported seed, brown,—Both varieties are sown like cress, and used as it is as small salad.

The seed of the white has proved useful in dyspepsia. From the seed of the brown is manufactured the condiment in daily use.

NASTURTIUM, OR INDIAN CRESS.

The flowers and young leaves are used as salad. The leaves are gathered whilst green and tender, and pickled, as substitute for capers.

OKRA. GOMBO.

The use of this vegetable is fast increasing. It is esteemed highly nutritious, and among the most wholesome vegetables.

Plant the seeds late in Spring, in hills or drills—if in hills, two to three feet apart, and two to three plants in each—drills, three feet apart, and 8 or 10 inches between the plants. The seed is liable to rot in the ground, and

should be put in thickly, to secure the requisite quantity of plants. Very rich ground is demanded by this vegetable.

ONION,

Silver skin, yellow Strasburg.—Sow the seed early in the Spring, very thickly, in beds or drills—at mid-summer, or whenever the tops die, remove them to a dry place—early in the following Spring re-plant them in rows, the bulbs two or three inches apart, the rows wide enough to hoe between them. By this process onions of large size are obtained early in the season.

Wethersfield red.—This variety is grown in the middle and eastern states of full size, the first season. Sow the seed early in the Spring in strong ground, thin them to stand two or three inches apart, and keep the ground in fine tilth.

PARSLEY.

Curled plain.—Sow early in the Spring, in rows or beds; the former is the better mode. If the seed be soaked in warm water some hours immediately before sowing it, it will vegetate more speedily. It is not uncommon for it to lay in the ground two or three weeks before it vegetates.

PARSNEP,

Fine sugar. Sow early in the Spring, in good ground, deeply dug. The best mode is in drills, eighteen inches apart. When the plants are up two or three inches, thin them to stand six or eight inches apart. The variety here named is decidedly the best.

PEA,

Landreth's extra early, rods 2½ feet, early frame, do. 2½ do.; early Charlton, do. 3 do.; dwarf blue imperial, do. 2 do.; dwarf marrow, do. 3 do.; tall sugar, do. 5 do.;—Arranged in the order of their ripening.—The first named has been pronounced the earliest in America. The varieties here enumerated are not one-fourth of those in cultivation, but they are among the better sorts, and more than sufficient for any garden. The pea thrives best in light loamy soil. The early sorts, especially, demand rich ground. Sow in drills which may be drawn singly or two nearly together. When the plants are up a few inches, hoe them and draw earth to the stems, and when they begin to vine, rod them. The first plantings may be made so soon as the ground will work, and for a regular succession sow at short intervals during spring and early part of summer.

PEPPER,

Bull nose, sweet.—These varieties resemble each other. The sweet possesses less warmth. They are principally used for pickling.

Cayenne.—The cayenne is usually ground when dry for table use. The pods, when green, are also pickled. Sow each kind in drills, on a warm border, late in Spring or commencement of Summer, and thin them to stand 16 or 18 inches apart.

POTATO.

Irish, early and late.—Of the Irish potato several varieties are cultivated. Among the early, *Fox's seedling, and Ash-leaved Kidney* rank high. Among the late, Foxite and Mercer obtain the preference in this section.

Sweet,—These may be advanced by sprouting the roots in a hot-bed; and when all danger from frost has passed, slipping off the sprouts and planting them.

PUMPKIN.

Cashaw, common field.—There are several varieties of the pumpkin, of which the cashaw, a long crooked-necked kind, is deemed best for cooking. Plant latter end of Spring in hills eight or ten feet apart each way.

RADISH,

Long scarlet, long salmon, white turnep-rooted, red turnep-rooted.—These are generally used for the earlier sowings, which should be made on a sheltered border, as soon in the Spring as the ground can be worked. The land should be well manured, deeply dug, and raked free from clods and stones; if cold weather return after the seeds have sprouted, protect by cedar brush, straw, or the like.

Yellow turnep-rooted, summer white.—These are better adapted to the Summer than the preceding, which in warm dry weather soon become tough and sticky.

White Spanish, black do.—For Winter and Spring use. Sow early in Autumn.

RHUBARB,

Tart.—This species is cultivated for the footstalk of the leaf, which possesses an agreeable acidity, and resembles the gooseberry when made into pies or tarts. Sow the seed in seed-bed early in the Spring and transplant in the Autumn or ensuing Spring, to any desired situation, allowing the plants two to three feet square.

SALSAFY, OR VEGETABLE OYSTER.

The roots are boiled and stewed like carrots, as a vegetable dish; or par-boiled; made into cakes, with paste, and fried like oysters, which they closely resemble in both taste and scent. The stalks of one year old are used in the Spring as asparagus.

It is cultivated precisely like the carrot and parsnep, withstands the Winter, but for convenience had better be removed in Autumn to some sheltered place.

SCURVY GRASS,

Used as small salad. In season throughout the Winter and Spring. Sow in drills or broad cast early in Autumn, and protect during winter by a sprinkling of straw.

SEA KALE.

This vegetable is in high repute in England. It is forced into growth early in the Spring, blanched and used as asparagus. Plant in hills about two feet apart.

SORREL,

French,—Used as salad. Sow middle of Spring, in shallow drills, and thin the plants to twelve inches apart.

SPINACH,

Round Savoy-leaved, prickly seeded,—May be grown either broad cast, or in drills. For Spring and early Summer use, sow as early as the ground can be tilled, and afterwards at short intervals. For autumn supply, sow at close of Summer. For Winter and early Spring use, sow middle of Autumn. The latter sowing will need a sprinkling of straw or long manure, on the arrival of cold weather.

Spinach is one of those vegetables for which the ground cannot be too rich; the stronger it is, the more succulent will be the leaves.

SQUASH,

Early bush, long green crook-neck, cocoa-nut,—Plant at same time with the early cucumber, and cultivate in like manner. The *bush* variety occupies but little room and is best adapted to small gardens.

TOMATO OR LOVE APPLE.

Sow in hills three feet apart, on a warm border, early in the Spring. For a later supply, sow a short time afterwards in a more open situation. As the plants advance in growth, support them by brush-wood. To have the tomato very early, it is necessary to start the plants in a hot-bed, or they may be reared in a flower-pot in a window, and subsequently transplanted.

TURNEP,

Early Dutch white flat, red topped, early stone, large globe, yellow Swedish or ruta-baga, white Swedish.—The best for family use, and indeed for general culture, are the two first named, which resemble each other in all respects but color.

For summer use, sow early in the Spring; they are not, however, certain to succeed at that season. For the main crop, sow at close of Summer, and protect during Winter in mounds of earth.

The ruta-baga or Swedish, requires more time to mature, and should be sown at midsummer or earlier; it is more generally grown for stock than table use, but is excellent late in Spring when other kinds have become pithy.

Stone Walls.

MANNER OF CONSTRUCTING THEM.

Of all the different kinds of writings, none are to me more interesting and instructing than those of travelers. The manner in which they relate the various incidents with which they meet—the interest they take in the arts, agriculture, and curiosities of a country, indicate with great accuracy the bent of their minds. Thus in the travels of Prof. Silliman, we see the philosopher, the geologist—in those of Carter, the statesman, the admirer of grand and beautiful scenery—of Prof. Humphrey, the accurate observer of men and things. While many men travel over a country without imbibing a single new idea, and can tell of nothing worthy of notice, save of good things they may have eaten by the way; others, as a Colman or an Ulmus, will tell of the various improvements in agriculture, state of the crops, beautiful farms, orchards of rare fruit, &c. Farmers usually remark upon the quality of the soil, farm buildings, cattle, and whatsoever is new in farm implements, or admirable in the tillage or crops of the country.

During my excursions, which have extended but little farther than *to mill and to meeting*, my attention has been particularly directed to fences, the different materials of which they were composed, and their comparative durability. I design, agreeably to my caption, to make a short article on the different kinds of stone wall, and the manner of building them.

The best, of course, is a full height real New England wall, but as we have no stone for building such walls in Western New York, it is needless to remark further upon it. Half wall, built three feet high of stone, and surmounted with posts and boards, rails or poles, is becoming quite common; but as there is so great dissimilarity in the manner of building it, it may be profitable to describe some of the different ways, and remark upon their relative advantages.

The handsomest wall I ever saw was made of cobble stone, three feet high, three feet wide at bottom, one and a half at top—laid in regular courses, the largest at bottom—having strips of cedar running through the wall every few feet to act as binders. Posts sawed six inches square at bottom, tapering to two by six at top, were inlaid once in seven feet. To these were nailed two boards six inches wide, with six inches of space between them. Wall made in this manner is

very durable, except when exposed to high winds. In exposed situations, the wall is very liable to be thrown down, by the posts acting with a great purchase upon it.

Another way of making half wall, and I think more durable, is of common field stone, the thickness of which is governed somewhat by the quality of the stone—three feet high, and surmounted by a pole of black ash or cedar, sometimes laid on blocks raising them three or four inches above the stone, and at other times small stones are laid so as to nearly cover the pole. Across this pole stakes are driven once in twelve feet, and then another pole laid in such a manner as to break joints with the lower one. A fence made in this manner, if the stone are well laid, will not blow down, and I think far more durable than the former. Stakes standing out from the wall are objected to as unsightly, and perhaps they may be sometimes in the way in ploughing.

To prevent frost throwing the fence, flat stones are laid slanting so that the water may run off from them. This I think important.

Another method I have seen practised, is to lay turf between each layer of stone. This adds to the appearance of a wall, and I think when proper turf can be obtained, tends to strengthen it, the moisture of the stone keeping the turf from decaying.

In conclusion I would remark, that the materials for making half wall are much more common than those who have never made any wall would suppose. Let a farmer who has a field which he designs to plough, draw off all the stone to one side of the field before he commences. After the field is ploughed, harrowed and sown, and before he goes on with the roller, let him go over it again with his stone boat; and follow this practice for two or three years, and if he does not have stone enough to make a half wall on one side of his field, he will have at least very much improved the appearance of it.—*Genesee Farmer.*

Culture of Rhubarb, or Pie Plant.

As the season is now at hand for sowing and planting this most excellent vegetable, the annexed communication of Mr. Edward Sayers is very opportune. To those who have cultivated it, or partaken of tarts made from it, we need not dwell upon its excellence, but to such as are unacquainted with it, we will remark, that as a material for deserts it is unexcelled by any other plant or fruit that grows. For such purposes many prefer it to the gooseberry, and indeed, when its virtues in a medical point of view are taken into the account, we hold it as a duty for every parent to keep a few roots in his garden, as while it answers for the purpose of preparing one of the most excellent tarts that can be made, its curative powers in the summer complaint of children, and indeed, in all affections of the bowels, either in the young or adult, should commend it to general culture. While tarts compounded from it, serve either to remove or prevent such diseases, those made from other materials exert an injurious influence.—*Balt. Far.*

[From the American Gardener's Magazine.]

CULTURE OF THE PIE PLANT, OR RHUBARB.

The pie Rhubarb is one of the best known substitutes for green gooseberry *tarts*, in the early part of the spring, and by many persons is greatly preferred in wholesomeness and flavor. This excellent vegetable has been cultivated in the vicinity of large cities, in most countries, where it has always found a steady demand, as a market vegetable, and in private gardens it is always the first consideration.

Culture and Management.—The rhubarb is of easy culture, and very hardy, which renders it peculiarly adapted to this climate. It may be propagated either by seed or cuttings. The seed may be early sown in the spring, on the west border in drills, eighteen inches apart, and managed in usual way of culture: the plants will be of a sufficient size to remove into a stationary bed, in the month of October, which is the best time for planting rhubarb. The method I have generally followed, and found to answer best, in making new plantations, is, by dividing the old roots and crowns, in such a manner that each set has one or more eyes. These *sets* I plant in nursery rows, two feet apart, and one foot from each other in the rows, in the spring, and remove them into their stationary bed in the fall.

Preparing and Planting.—The ground intended should be well prepared by manuring and trenching, as the rhubarb requires deep rich soil; this done, the bed may be divided into rows four feet apart each way, and at the angles the soil may be taken out of the depth of eighteen inches into which may be planted one large root entire, which is to be covered with at least half of a wheelbarrow of well rotted manure, when the surface may be levelled. The after management of rhubarb requires good culture, as manuring, keeping clean, &c. If the plants are slightly protected, in the fall, with a quantity of manure, they will be benefited, and will also strengthen their roots.

The routine of planting rhubarb should be every three years, as young plants always produce the most tender stalks or canes. The method I have adopted is, to take up one-third of my bed every year, by which I always keep up a good succession of young plants.

Yours, Edward Sayers.

INTERESTING TABLE.

A TABLE *to show, at a glance, the number of Hills or Plants contained in an acre of land, at any given distance from each other, from* 40 *feet by* 40, *to* 1 *foot by* 1, *omitting fractions.*

feet.	feet.	per acre.	feet.	feet.	per acre.	feet.	feet.	per acre.
40	by 40	27	8	by 7	777	3 9	by 2 9	4224
39	 39	28	—	 6	905	—	..... 2 6	4626
38	 38	30	—	 5	1089	—	..... 2 3	5102
37	 37	31	—	 4	1361	—	..... 2 0	5808
36	 36	33	—	 3	1815	—	..... 1 0	6637
35	 35	35	—	 2	2722	—	..... 1 6	7744
34	 34	37	—	 1	5445	—	..... 1 3	9272
33	 33	40	7	..... 7 0	888	—	..... 1 0	11616
32	 32	42	—	..... 7 6	957	3 6	..... 3 6	3555
31	 31	45	—	..... 6 0	1037	—	..... 3 3	3829
30	 30	48	—	..... 5 6	1131	—	..... 3 0	4148
29	 29	51	—	..... 5 0	1244	—	..... 2 9	4525
28	 28	55	—	..... 4 6	1382	—	..... 2 6	4978
27	 27	59	—	..... 4 0	1555	—	..... 2 3	5531
26	 26	64	—	..... 3 6	1777	—	..... 2 0	6222
25	 25	69	—	..... 3 0	2074	—	..... 1 9	7111
24	 24	75	—	..... 2 6	2489	—	..... 1 6	8297
23	 23	82	—	..... 2 0	3111	—	..... 1 3	9956
22	 22	90	—	..... 1 6	4148	—	..... 1 0	12445
21	 21	98	—	..... 1 0	6222	3 3	..... 3 3	4124
20	 20	108	6	..... 6 0	1210	—	..... 3 0	4818
—	 15	145	—	..... 5 6	1320	—	..... 2 9	4873
—	 10	217	—	..... 5 0	1452	—	..... 2 6	5361
—	 5	435	—	..... 4 6	1613	—	..... 2 3	5956
19	 19	120	—	..... 4 0	1815	—	..... 2 0	6701
—	 15	152	—	..... 3 6	2074	—	..... 1 9	7658
—	 10	229	—	..... 3 0	2420	—	..... 1 6	8935
—	 5	458	—	..... 2 6	2904	—	..... 1 3	10722
18	 18	134	—	..... 2 0	3630	—	..... 1 0	13403
—	 15	161	—	..... 1 6	4840	3 0	..... 3 0	4840
—	 10	242	—	..... 1 0	7260	—	..... 2 9	5289
—	 5	484	5 6	..... 5 6	1417	—	..... 2 6	5808
17	 17	150	—	..... 5 0	1584	—	..... 2 3	6453
—	 15	170	—	..... 4 6	1760	—	..... 2 0	7260
—	 10	256	—	..... 4 0	1980	—	..... 1 9	8297
—	 5	512	—	..... 3 6	2262	—	..... 1 6	9680
16	 16	170	—	..... 3 0	2640	—	..... 1 3	11616
—	 15	175	—	..... 2 6	3168	—	..... 1 0	14520
—	 10	272	—	..... 2 0	3960	2 9	..... 2 9	5760
—	 5	544	—	..... 1 6	5280	—	..... 2 6	6336
15	 15	193	—	..... 1 0	7920	—	..... 2 3	7040
—	 10	290	5 0	..... 5 0	1742	—	..... 2 0	7920
—	 5	580	—	..... 4 6	1936	—	..... 1 9	9051
14	 14	222	—	..... 4 0	2178	—	..... 1 6	10560
—	 10	311	—	..... 3 6	2489	—	..... 1 3	12672
—	 5	622	—	..... 3 0	2904	—	..... 1 0	15840
13	 13	257	—	..... 2 6	3484	2 6	..... 2 6	6969
—	 10	335	—	..... 2 0	4356	—	..... 2 3	7740
—	 5	670	—	..... 1 6	5808	—	..... 2 0	8712
12	 12	302	—	..... 1 0	8712	—	..... 1 9	9956
—	 10	363	4 6	..... 4 6	2151	—	..... 1 6	11616
—	 5	720	—	..... 4 0	2420	—	..... 1 3	13939
11	 11	360	—	..... 3 6	2765	—	..... 1 0	17424
—	 10	396	—	..... 3 0	3226	2 3	..... 2 3	8604
—	 5	792	—	..... 2 0	3872	—	..... 2 0	9680
10	 10	435	—	..... 1 6	4840	—	..... 1 9	11062
—	 9	484	—	..... 1 0	6453	—	..... 1 6	12906
—	 8	544	4 0	..... 4 0	9680	—	..... 1 3	15488
—	 7	622	—	..... 3 9	2722	—	..... 1 0	19360
—	 6	726	—	..... 3 6	2904	2 0	..... 2 0	10890
—	 5	871	—	..... 3 3	3111	—	..... 1 9	12445
—	 4	1089	—	..... 3 0	3358	—	..... 1 6	14520
—	 3	1452	—	..... 2 9	3630	—	..... 1 3	17424
—	 2	2178	—	..... 2 6	3960	—	..... 1 0	21780
—	 1	4356	—	..... 2 3	4356	1 9	..... 1 9	14223
9	 9	537	—	..... 2 3	4840	—	..... 1 6	16594
—	 8	605	—	..... 2 0	5445	—	..... 1 3	19913
—	 7	591	—	..... 1 9	6222	—	..... 1 0	24454
—	 6	806	—	..... 1 6	7260	1 6	..... 1 6	19360
—	 5	968	—	..... 1 3	8712	—	..... 1 3	22232
—	 4	1210	—	..... 1 0	10890	—	..... 1 0	29040
—	 3	1613	3 9	..... 3 9	3097	1 3	..... 1 3	27878
—	 2	2420	—	..... 3 6	3318	—	..... 1 0	34848
—	 1	4840	—	..... 3 3	3574	1 0	..... 1 0	43560
8	 8	680	—	..... 3 0	3872			

For the Farmers' Cabinet.

As "book farming" is so obnoxious to some of our practical agriculturists, and the introduction of science or system, by any thing written on a subject is so seldom read by such, — who consider the mere saying "I know," a sufficient illustration in any matter relating to farming, it is not to be wondered at that so little improvement is made in the business of agriculture.

One farmer will tell you, "I know there is money made by stall-feeding cattle," yet at the same time, he cannot tell how much hay or grain he has fed. Perhaps in a future number I may give an account of some stall feeding of the last winter. My object in this was to exhibit a table, showing the number of spaces contained in an acre of land at various given distances. [See Table on preceding page.]

The foregoing table contains all that is necessary for liming or manuring land, planting corn, roots, &c., aided by which, we may make some curious and interesting calculations. If we take corn, for instance, as it is most in season,—mine is of the yellow kind, 14 rowed, slightly indented, about 120 ears of which will make a bushel, weighing 58 lbs. On an average, the ears contain each 630 grains, making 75,600 grains in a bushel of ordinary corn; but if selected for seed, the bushel consists of about 61,248 grains. Now, if ground be marked out 4 feet by 3, (if convenient have the north and south spaces the wider,) an acre will contain 3,630 hills; calculating that each hill will produce three ears of corn, which is not an extravagant calculation for a favorable season; we have 10,890 ears, or 90 bushels per acre. If four grains were planted in each hill, it did not require quite 8 quarts to plant an acre; it is better, probably, to plant 5 or 6 grains in each hill, and depend upon the after weeding to regulate the numbers.

As a stimulant for practical farmers, I glean the following from an agricultural work now before me:

"In 1822, J. & M. Pratt, of Easton, Madison county, New York, obtained from one acre 172¼ bushels of corn; from two others, each 161 bushels. In 1821, the same gentleman obtained from 4 acres 680 bushels, or 170 to the acre. Their crops were subjected to the examination of committees for a premium, and they say they have no doubt of being able to raise 200 bushels per acre."

"In 1823, Benj. Bartlett, of Easton, Madison county, New York, obtained from one acre 174 bushels. The veracity of this gentleman is equally unquestioned, and his too, was a premium crop."

J. J. M.

Chester County, April 23, 1837.

For the Farmers' Cabinet.

Raising Cabbage.

Mr. Editor.—It being about the time of planting seeds for raising Cabbage, I would observe, that for two years past I have raised them from old stalks. Plant such stalks as have not been injured by frost, quite deep in the ground in the spring season; they will sprout from under the surface, and will take root about the usual time of setting out plants. My method has been to take off these sprouts as close to the stalks as convenient, and set them out as other plants. Last spring I set both kinds at the same time, and they flourished equally well; no difference would be observed.

Yours, &c. T. Wood.

Stretsville, Pa. April 14, 1837.

PUMPKINS.—A subscriber wishes information through the Cabinet, as to the best method of preserving pumpkins during the winter.

The Markets

Are still in a very unsettled state — so much so, that we think proper to omit our Prices Current for the present number. Great pecuniary distress pervades the commercial cities and principal towns along the sea board, which must ere long be felt seriously in the interior. The failures in New York and New Orleans have swelled to a frightful and almost incredible amount —In the latter city, cotton and flour cannot find purchasers at one half the former rates. The entire business operations of the country are unhinged. It is not our intention here to investigate the causes by which this much deplorable state of our monetary affairs has been produced to the serious injury of the country. One fact, however, should be known and remembered by all—it is that during the last year, (1836,) our *imports* from foreign countries exceeded our *exports* more than SIXTY MILLIONS OF DOLLARS: this ought not to be. The balance of trade should be in our *favor*, not *against* us. We have witnessed the last year what we hope may never occur again—America, always considered as the granary of the world, *importing large quantities of bread stuffs*. Besides, there are hundreds of articles brought from foreign countries at a great expense, that could easily be raised by our farmers to their advantage, and consequently, to the benefit of the country. We advise farmers to be content with their rural homes—to cultivate thoroughly their plantations; strive to excel in agricultural science, remembering that he who causes "two blades of grass to grow where only one grew before," is a benefactor to his race—be content with certain and moderate gains, and you have nothing to fear. To young men, the sons of farmers, we most respectfully say, learn perfectly the art of tilling the ground—there is no occupation more honorable or dignified—and fix not your minds on the gaieties of a city life, or the pursuits of trade or commerce. Sudden fortunes are seldom made, and trade and commerce are at best, but hazardous enterprises. The bow of promise surrounds them it is true, but it has led thousands on to ruin; of this the present state of affairs affords melancholy proof. The whole mercantile world is convulsed. But the prudent and thrifty farmer, and every farmer who will can be both prudent and thrifty, feels not the shock—surrounded by every needful comfort, his lot is an enviable one. He is truly an independent man.

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